November 13, 2006

Mr. Dan Suter
On-Scene Coordinator
U.S. EPA Region IX – Emergency Response Section
75 Hawthorne Street
San Francisco, CA 94105

Subject: **Site Report for**
Brentwood Skatepark Mercury Response
198 Griffith Lane
Brentwood, California 94513-1963
TDD #TO1-09-06-06-003

N 37°55.55196, W 121°42.30432

Dear Mr. Suter:

This letter report summarizes site activities conducted and observations made at the Brentwood Skatepark Mercury Response site from October 23, 2006 through October 24, 2006 as requested by the U.S. EPA.

1.0 INTRODUCTION

The United States Environmental Protection Agency Region 9 (EPA) Emergency Response Section (ERS) directed Superfund Technical Assessment and Response Team (START) Team 9 to provide technical assistance at a mercury spill in Brentwood, Contra Costa County, California.

On Monday, October 23, 2006, Adam Palmer of the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) contacted the EPA Spill Phone duty officer to request assistance on a mercury spill that occurred at a skatepark in Brentwood, California. On-Scene coordinators (OSC) Steve Calanog and Dan Suter were notified. OSC Suter then requested technical assistance from Team 9. On-call team members Howard Edwards

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and Nicole Testa responded. This letter report summarizes the site activities that occurred during this response. A site vicinity map is included as Figure 1. The area of concern is illustrated on Figure 2. A photographic log is included as Attachment A.

2.0 BACKGROUND AND SITE DESCRIPTION

On October 23, 2006, Adam Palmer from the DTSC requested EPA ERS assistance with the assessment and cleanup of a small mercury spill at a skatepark in Brentwood, California. The city-managed park is located at 198 Griffith Lane, Brentwood, Contra Costa County. This location is a public recreation facility containing a park, two swimming pools, and a skatepark. The skatepark is comprised of concrete skating surfaces and bricked seating areas. The spill occurred within the southwestern portion of the fence-enclosed skatepark along a concrete banked turn area. The area of concern is illustrated on Figure 2.

An initial spill response by the Contra Costa County Hazardous Materials Programs' responders was made on October 22, 2006. According to Maria P. Duazo from Contra Costa County Health Services, Hazardous Materials Programs (County Health) the response team vacuumed the mercury-impacted area three times. However, due to the County Health's lack of mercury vapor detection equipment, it was unknown if released mercury had been sufficiently removed from all skatepark areas, and if a risk to human health remained. Team 9 was notified on October 23, 2006 that they and the EPA ERS would be assisting the DTSC and County Health in determining whether mercury contamination was still present at the facility.

3.0 INITIAL ASSESSMENT

On October 23, 2006, at approximately 1230, Team 9 members Howard Edwards and Nicole Testa mobilized to the scene, where they were briefed by park facility representatives, who stated that four to five teenaged children were in possession of a container of mercury within the skatepark area. Once park facility representatives were notified of the presence of mercury, they immediately evacuated the area and notified the County. The container of mercury had not been located. The skatepark was closed, with a police officer posted in front to prevent unauthorized entry. At approximately 1425, OSC Suter arrived with Maria P. Duazo from County Health.

Upon arrival, two Lumex Mercury Vapor Analyzers, with mercury vapor sensitivity of 2 nanograms per cubic meter (ng/m^3) (0.000002 mg/m^3), were calibrated and readied for use by Team 9. Team 9 then conducted an initial observation of the area, as well as a Health and Safety Survey. Team 9 began by monitoring the skatepark perimeter breathing zone, noting that no readings were significantly above background level. Because perimeter readings did not exceed the Health and Safety action level of 25,000 ng/m^3 for Level C upgrading, level D personal protective equipment (PPE) was maintained during entry into the fenced skatepark area. Team 9 monitored the western skatepark areas between the entry gate and the northwest corner area as part of the health and safety survey. No mercury vapor concentration above 250 ng/m^3 were found at either adult breathing zone (5 feet above ground surface) or child breathing zone (2 feet above ground surface).

Following the initial health and safety survey, Team 9 was directed to assess the southwestern portion of the skatepark, where cleanup had occurred the previous day. The planning associated with the data collection effort is documented in the Brentwood Skatepark Emergency Response and Time Critical Quality Assurance Sampling Plan (ER-QASP) for Air Sampling. The initial survey and assessment surveys were performed in Level D following Team 9's Health and Safety Plan for the response. Mercury sampling was performed both at ground level (less than 2 inches ground surface) and within the breathing zones. Breathing zone readings were typically no higher than background range. Mercury vapor concentrations of approximately 200 ng/m^3 were noted at 2 feet above ground surface in the center of the banked turn area in the southwest portion of the skatepark. The center of the banked turn area was the reported location where the elemental mercury had been found and removed. The mercury vapor concentrations found were well below the Agency for Toxic Substances and Disease Registry (ATSDR) suggested action level for mercury of 1,000 ng/m^3 (Residential Occupancy Level). Air monitoring at the ground level suggested that mercury was still present in the seams between the concrete surfaces. Mercury vapor concentrations of up to 13,000 ng/m^3 were noted within the seams that ran through the middle of the banked turn area. Additionally, slightly elevated vapor concentrations

(600 to 13,000 ng/m^3) were noted when monitored directly above other seams and cracks throughout the banked turn area.

Following the completion of air monitoring in the southwestern portion of the skatepark, Team 9 proceeded to monitor the remainder of the skatepark at ground level. Slightly elevated vapor concentrations at ground level were noted in the skate bowl (300 ng/m^3) directly north of the area of concern, and surrounding a cement bench (3,500 ng/m^3) in the northwestern portion of the skatepark. Mercury vapor concentrations above background were not noted within the breathing zone in any portion of the skatepark. In addition to sampling the ground and breathing zone, Team 9 checked all trash cans, sheds, drains, tables, vending machines, water fountains, and containers for signs of mercury contamination. No significant mercury vapor concentrations were noted.

Team 9 reported these findings to OSC Suter and County Heath officials. Team 9 was requested to re-sample the area around the cement bench in the northwestern portion of the skatepark. Secondary readings were approximately 200 ng/ m^3.

Nancy McGee (DTSC) arrived on-scene at approximately 1530. OSC Suter briefed her on the situation, stating that the breathing zone was below permissible levels throughout the site; however, ground level readings at the concrete seam in the southwest area were still fairly high. OSC Suter stated that based upon the mercury vapor concentrations found during the air monitoring, it was his opinion that no significant health risks existed. However, due to the nature of the facility, re-vacuuming and/or sealing should be considered, particularly within the seams and cracks in the southwest area. Based on this information, County Health decided to re-vacuum the seams and crack in the southwest area of the skatepark.

4.0 REMOVAL ACTIVITIES

At 1719, Steve Morioka and Paul Andrews from County Health arrived on-scene. OSC Suter provided them with a situation update and identified the contaminated area. Three seams were identified for further vacuuming.

A mercury vacuum was used to attempt to remove residual mercury within the seams and cracks of the cement. Three attempts were made to remove contamination. After each vacuum attempt, mercury vapor concentrations were sampled utilizing the Lumex Mercury Vapor Monitor. mercury vapor readings were taken at both ground level and at 2 feet above ground surface—the estimated breathing zone for children. Mercury vapor concentrations at ground level showed little decrease, persisting at ranges of 500 to 5,000 ng/m^3. Breathing zone maximum vapor levels were recorded to be 200 ng/m^3. To further mitigate the vapors at ground level, Team 9 and County Hazmat members sprinkled Hg-Absorb within the seams of the cement; wet it in accordance with the manufacturer's directions; and allowed it to sit for approximately 15 minutes. Breathing zone vapor concentrations decreased to less than 10 ng/m^3 in all areas. The Hg-Absorb was vacuumed, and the areas were re-sampled. Elevated vapor concentration readings persisted at ground level. In an attempt to further mitigate mercury vapor concentrations, sealant was applied to the cracks. At 2030, officials left the scene to allow the sealant to dry overnight.

On October 24, 2006, Team 9 member Howard Edwards returned to the scene to assess the mercury vapor concentration in the previously sealed areas. While mercury vapors at the ground level in areas directly over the seams remained high, breathing zone measurements were well below action levels. It was concluded between OSC Suter, DTSC, and County Health that the residual mercury vapor concentrations within the skatepark did not pose a threat to human health. City of Brentwood representative were notified that it would be safe to reopen the skatepark.

5.0 SUMMARY

A mercury response and related assessment was conducted between October 22 and October 23, 2006 by the EPA and Team 9 staff at the Brentwood Skatepark, located at 198 Griffith Lane in Brentwood, California. Team 9 documented the presence of mercury vapors at ground level within the southwestern portion of the skatepark. Following the assessment, EPA and Team 9 staff provided technical assistance to the Contra Costa County Hazardous Materials Unit for

additional cleanup within the seams and cracks of the impacted portion of the skatepark. Following additional clean up activities, the seams in the area were sealed with an Epoxy sealant. It was concluded by the OSC Suter and County Heath that risk to human health due to mercury vapor was minimal.

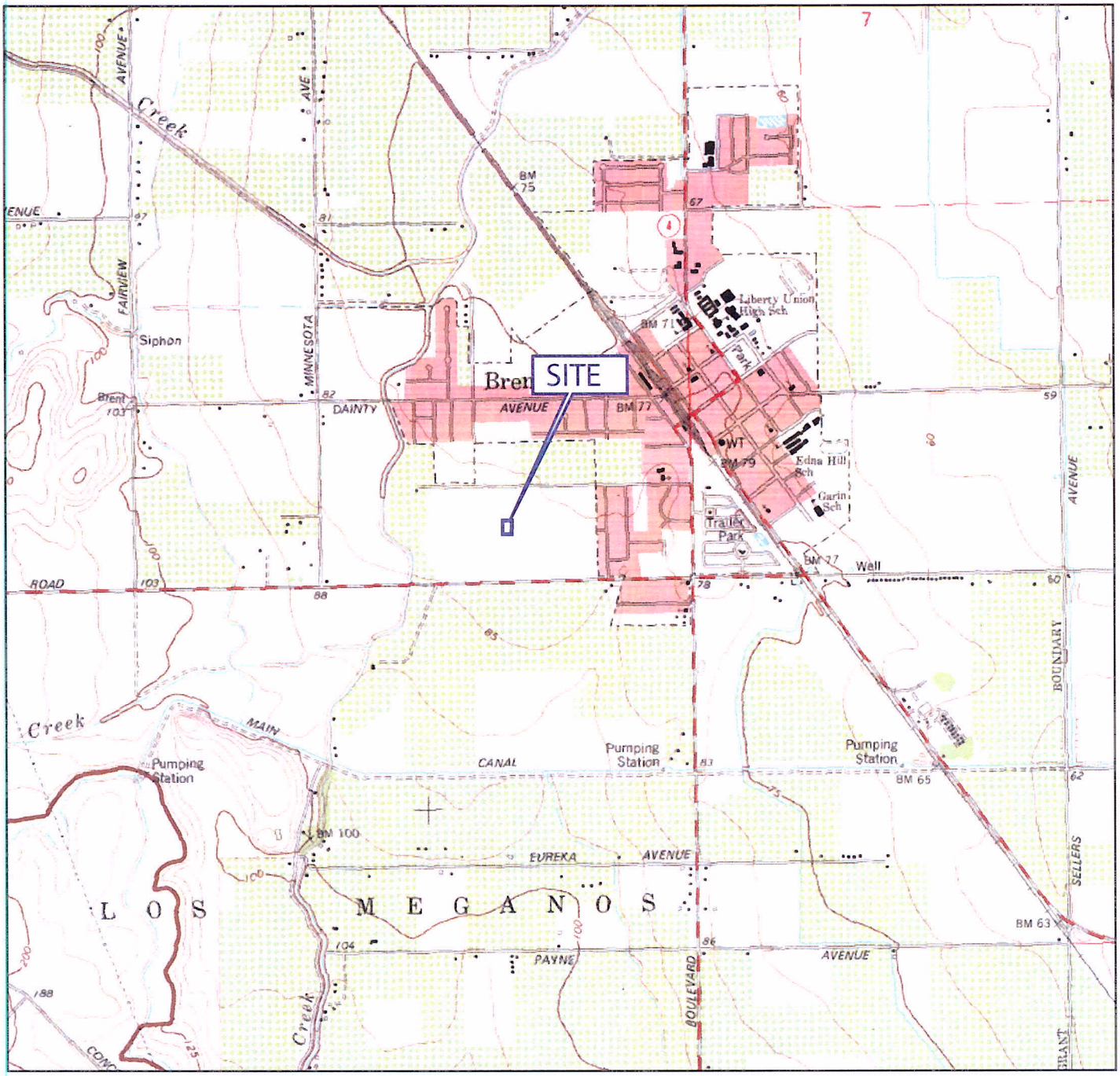
Thank you for the opportunity to be of assistance. Please contact us at 415-896-5858 if you have any questions or concerns.

Sincerely,

Howard Edwards and Nicole Testa
START Team 9

Figure 1	Site Location
Figure 2	Site Map
Attachment A	Site Photographs

FIGURES



SCALE = 1 : 24,000

1 1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000

0 0.5 0 1 KILOMETER

NORTH

MAP REFERENCE:

PORTIONS OF U.S.G.S. QUADRANGLE MAP,
7.5-MINUTE SERIES (TOPOGRAPHIC)

QUADRANGLE LOCATION

SITE VICINITY MAP

Brentwood Skate Park Mercury ER
198 Griffith Lane
November 2006 Brentwood, CA

Figure 1

V:\START\SITE FOLDERS\Brentwood Skate Park\Fig1.ai

NORTH

0 45 90 180

Approximate Scale in Feet

SITE MAP

Brentwood Skate Park Mercury ER
198 Griffith Lane
November 2006 Brentwood, CA

Figure 2

V:\START\SITE FOLDERS\Brentwood Skate Park\Fig2.ai

ATTACHMENT A

SITE PHOTOGRAPHS

PHOTOGRAPHIC LOG

Brentwood Skatepark Mercury Response

Date: October 23, 2006

Photo No.	Date:
1	10/23/06

Description:

Image of Skatepark

Photo No.	Date:
2	10/23/06

Description:

Team 9 member Howard Edwards monitoring Area of Concern.

Photo No.	Date:
3	10/23/06

Description:

Example of seams within skatepark cement.

Photo No.	Date:
4	10/23/06

Description:

Contra Costa County Hazmat Team member using Hg-Absorb to mitigate vapors.

Photo No.	Date:
5	10/23/06

Description:
Contra Costa County Hazmat Team member vacuuming impacted areas.

Photo No.	Date:
6	10/23/06

Description:

Brentwood Park Staff performing sealing to suppress remaining vapors..